

# INFRARED AUDIO PLAYER

## BACKGROUND OF THE INVENTION

### 1. Field of the Invention

The present invention relates to an audio player, and more particularly to an infrared audio player to process digital information to audio signal so as to be received by other appliance.

### 2. Description of Related Art

Currently, the existing MP3 player is able to store large amount of audio information via the processor and the storage device. Due to the advanced compressing technique, the conventional diskette and tapes are gradually obsolete. Although the MP3 player is able to process large amount of information, the MP3 user can only listen to the music directly from the headset or indirectly from the speaker connected to the output of the MP3 player. Alternatively, the MP3 player may use the USB (universal series bus) to link with other appliances so as to accomplish the transmission of digital information. As a result, the application of the MP3 player is limited in many aspects.

To overcome the shortcomings, the present invention tends to provide an improved audio player to mitigate the aforementioned problems.

## SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide an improved audio player having infrared transmission capability so that the audio player is able to transmit digital information wirelessly.

Other objects, advantages and novel features of the invention will become more apparent from the following detailed description when taken in

1 conjunction with the accompanying drawings.

## 2 BRIEF DESCRIPTION OF THE DRAWINGS

3 Fig. 1 is a block diagram of the audio player of the present invention;

4 Fig. 2 is a perspective view of the audio player of the present invention;

5 and

6 Fig. 3 is a schematic view showing the application of the audio player of  
7 the present invention.

## 8 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

9 With reference to Figs. 1 and 2, the audio player (1) in accordance with  
10 the present invention includes a processor (10), an infrared transmitter (11), a  
11 USB (universal series bus) interface (12), a controller (13), a display (14), a  
12 storage (15), a decoder (16) and an analog/digital converter (17) such that the  
13 audio player (1) is able to use the infrared transmitter (11) to link with other  
14 appliances.

15 The processor (10) is the operation center of the audio player (1). The  
16 infrared transmitter (11) is electrically connected to the processor (10) to  
17 transmit and receive digital information. The USB interface (12) is electrically  
18 connected to the processor (10) to link the audio player (1) of the present  
19 invention with other appliance. The controller (13) is electrically connected to  
20 the processor (10) and has at least one key (131) to correspond to and control  
21 options in the processor (10). The display (14) is electrically connected to the  
22 processor (10) to display the selected option in the processor (10) by the  
23 controller (13). The display (14) is adjacent to the key (131) of the controller (13).  
24 The storage (15) is electrically connected to the processor (10) to store

1 information therein. The information may be MP3 information or MPEG4  
2 information. It is noted that a buffer (151) is sandwiched by the storage (15) and  
3 the processor (10). The decoder (16) is electrically connected to the processor  
4 (10) to decode the digital audio information so that the digital audio information  
5 is converted to digital information, wherein the decoder (16) is a MP3 decoder.  
6 The analog/digital converter (17) is electrically connected to the decoder (16)  
7 and converts the decoded digital information to audio signal to enable other  
8 appliance to properly play the audio signal directly.

9           With reference to Fig. 3, when the audio player of the present invention  
10 is in application, the key (131) from the controller (13) is pressed to select the  
11 digital information to be transmitted. The selected digital information is then  
12 displayed on the display (14). After the operator confirms the selected digital  
13 information, a appliance (2) with infrared transmitting ability is placed to  
14 correspond to the infrared transmitter (11) such that the digital information from  
15 the audio player (1) of the present invention is able to be transmitted to the  
16 appliance (2).

17           When the audio player (1) of the present invention is to receive digital  
18 information from the appliance (2), corresponding the audio player (1) of the  
19 present invention to the appliance (2) is essential. Then operation of the  
20 appliance (2) to transmit the digital information is able to allow the audio player  
21 (1) of the present invention to receive the digital information.

22           It is to be understood, however, that even though numerous  
23 characteristics and advantages of the present invention have been set forth in the  
24 foregoing description, together with details of the structure and function of the

1 invention, the disclosure is illustrative only, and changes may be made in detail,  
2 especially in matters of shape, size, and arrangement of parts within the  
3 principles of the invention to the full extent indicated by the broad general  
4 meaning of the terms in which the appended claims are expressed.